

CLAIMS

1. Method for determining an amount of sample in an evaluation area of a test element comprising
 - irradiating a sample that has been applied to a test field of a test element in a control wavelength range in such a manner that at least one evaluation area of the test field is detected by the radiation,
 - wherein the test field contains a control substance which interacts with a sample matrix of the sample in such a manner that the control substance interacts with the electromagnetic radiation in the control wavelength range as a function of the contact with the sample matrix,
 - detecting radiation that has interacted with the control substance to generate a detection value,
 - determining the amount of sample in the evaluation area by comparing the detected radiation with a known detection value of the control substance for a known amount of sample in the evaluation area.
2. Method as claimed in claim 1,
in which the amount of sample is determined by comparing the detected radiation with a threshold value in order to check whether the amount of sample present in the evaluation area is above or below a threshold value.
3. Method as claimed in claim 1,
in which the control substance does not substantially interact with the radiation in the control wavelength range when the evaluation area is not covered by the sample.
4. Method as claimed in claim 1,
which is used to analyse an analyte in the sample and an analyte-specific reagent in the test field interacts with the analyte in such a manner that a detection value in a detection wavelength range is detected as a function of the analyte concentration.

5. Method as claimed in claim 4,
in which the amount of sample that interacts with the reagent can be deduced from the amount of sample that comes into contact with the control substance.
6. Method as claimed in claim 4,
in which a concentration of the analyte is determined taking into account the detected amount of sample.
7. Method as claimed in claim 4,
in which the control substance does not substantially interact with the radiation in the detection wavelength range.
8. Analytical system for determining the amount of sample in an evaluation area of a test element comprising
 - an illumination unit that emits radiation in a control wavelength range in which a control substance interacts with the radiation as a function of a contact with a sample matrix,
 - a detector for detecting radiation that has interacted with the control substance to generate a detection value,
 - an evaluation unit for determining an amount of sample in the evaluation area of the test field by comparing the detected radiation with a known detection value of the control substance for a known amount of sample in the evaluation area.
9. Analytical system as claimed in claim 8,
comprising an illumination unit that emits radiation in at least two different wavelength ranges.
10. Analytical system as claimed in claim 8,
in which the wavelength range is in the range of 500 nm – 1000 nm or in the range of 360 nm to 500 nm.
11. Analytical system as claimed in claim 8,
which is used to determine a glucose concentration.

12. Test element for detecting an amount of sample comprising
 - a test field with an analyte-specific reagent which interacts with an analyte in a sample such that the analyte-specific reagent interacts with the radiation as a function of the analyte concentration when the test field is irradiated in a detection wavelength range and
 - comprising a control substance in the test field which interacts with a sample matrix of the sample such that the control substance interacts with the radiation as a function of the amount of sample applied to the test field when the test field is irradiated in a control wavelength range.
13. Test element as claimed in claim 12,
in which the control substance in the test element is a luminescent substance.
14. Test element as claimed in claim 12,
in which the control substance is a colour former.
15. Test element as claimed in claim 14,
in which contact with the sample matrix results in the formation of a dye which essentially completely absorbs in the control wavelength range as soon as the evaluation area is essentially completely covered by sample.
16. Test element as claimed in claim 14,
in which the control substance reacts with the water present in the sample matrix.
17. Analytical system as claimed in claim 11,
comprising a test element as claimed in one of the claims 12 – 16.
18. Method as claimed in claim 1,
which is carried out using an analytical system as claimed in one of the claims 8 – 11 or 17.